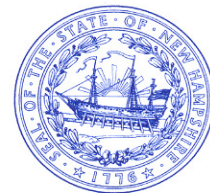




The State of New Hampshire  
*Department of Environmental Services*



Michael P. Nolin  
Commissioner

May 23, 2005

**SUBJECT: Soil Excavation and Disposal Specifications**

Dear Consulting Engineers:

The New Hampshire Department of Environmental Services (NHDES) provides regulatory oversight of petroleum contaminated sites, to ensure that the cleanup is cost effective and timely. A commonly used remediation method at these sites is soil excavation and disposal. To provide consistency in the specifications used for procurement of Contractors and execution of soil excavation and disposal projects, NHDES has prepared the attached **newly revised** soil excavation and disposal specifications **for use on all New Hampshire Petroleum Funds bid-based projects**. The **NHDES policy is to require the bidding of soil excavation projects where costs are expected to exceed \$75,000 or where the nature of the work and/or site conditions present a difficult or unique challenge as determined by the consulting engineer or NHDES.**

This document should be used as the base specification for your soil excavation and disposal project. However, using this document does not alleviate your firm from the responsibility of evaluating the specific requirements of the project. This document may include requirements that are not appropriate for your project site. Other requirements that are appropriate may be missing.

The attached Specifications must be thoroughly reviewed relative to their applicability for your project. This document is in no way considered complete for any given project, but is to be used as a template for your final project specifications. You must make whatever modifications, additions or deletions to the document that are necessary to ensure that the project will be executed using means, methods and precautions that are consistent with the current state of practice, and will provide acceptable post-construction performance of the remedy. **Please note that when modifying the attached specifications, all modifications, additions or deletions shall be highlighted when submitting to NHDES for review and approval. The general order of the sections shall not be modified, and all highlighted portions of the document, including the General Conditions section, shall not be modified. Any modifications or deletions of the General Conditions section shall be set forth in a Supplemental General Conditions section.**

During your engineering evaluations, you must determine which requirements of the attached specifications need to be modified, added or deleted. The following must be included in your evaluations:

1. The required type and thickness of fill, gravel base course, and pavement materials must be determined so that adequate performance of the paved areas under the expected traffic loading is ensured. You must make any modifications to the material types, thicknesses, placement and compaction requirements, subgrade preparation requirements, etc. that are included in the Specifications to ensure acceptable post-construction performance of the facility.
2. Any special requirements for dewatering the excavations must be included in the Specifications. If lowering groundwater levels prior to excavation is necessary, dewatering system performance requirements must also be included in the Specifications.
3. If on-site treatment and disposal of contaminated groundwater is an available or preferred alternative to off-site disposal, treatment system performance requirements and submittal requirements for the system must be developed and provided. Responsibility for the treatment system design, operation and maintenance, obtaining permits, sampling and testing of treated and un-treated water, etc. must also be established in the Specifications.
4. Plans showing the proposed excavation areas must be developed and included with the Specifications. The Plans must show the lateral and vertical limits of the proposed excavation. The Plans should also include details and cross-sections depicting the soil and groundwater conditions and existing structures, utilities and other features which may be impacted by the work.
5. The list of possible permits applicable to the project must be reviewed and modified to be project-specific.
6. The blanks in the specifications must be filled in to reflect specifics of the project, including the estimated dimensions of the excavation in Section 20.01 and the required completion time of the Contract in Section 1.00. Blanks at the beginning of the Bid Form for the Owner's name and project location must also be completed.
7. Estimated quantities must be added to the Bid Form.
8. Attachment A, detailing subsurface information and reports that will be made available for bidder review during the bid period, must be reviewed and modified to be project-specific.
9. It may be necessary to provide Supplemental General Conditions to augment the General Conditions sections. For example, the Responsibilities of Owner, and Prosecution of Work sections may include additional services to be provided by the Owner, such as power, water, and sanitary facilities, and any special restrictions that the Owner is placing on the prosecution of the Work, such as scheduling, maintenance of traffic, temporary access considerations, site access, hours and days of work, etc.

After you have completed your review and modifications to these Specifications, the project-specific Plans and Specifications must be submitted for review and approval by NHDES prior to the solicitation of bids from contractors. The purpose of our review is: 1) to limit the risk of increased project costs that may result from contradictions, or information missing from the Specifications, and 2) to ensure that item descriptions on the Bid Form are presented in a manner that will allow cross checking with reimbursement requests, and review of relevant unit costs.

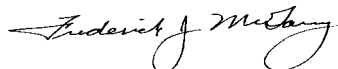
Plans and Specifications submitted to NHDES for review and approval must be stamped and signed by a qualified Professional Engineer, licensed in the State of New Hampshire. By doing so, you are certifying that the work required in the Plans and Specifications has been thoroughly reviewed and confirmed to be complete, and that you have made whatever modifications to the Specifications that are necessary for project execution and post construction performance.

Note that the attached document does not include contract terms and conditions (regarding indemnification, warranty, severability, termination, delays, payment terms, etc). NHDES assumes that this language will be included in a terms and conditions section that will establish a contractual relationship between the Owner and the Contractor. NHDES will not review the terms and conditions of the contractual agreement with the Contractor.

A Bid Bond is required as protection against a potential low bidder withdrawing its bid from consideration, thereby necessitating re-bidding the project, or awarding to the next lowest bidder. The Bid Bond would be used as compensation for the additional costs that would be incurred during the re-bidding process. The Performance Bond is required to ensure that the project is completed in accordance with the Plans and Specifications. In the event that a Contractor does not complete the Project, the Performance Bond funds would be used to complete the work without incurring additional costs.

If you have any questions regarding the attached specifications, please contact Robin Mongeon, P.E. at 271-7378 at the Waste Management Division.

Sincerely,



Frederick J. McGarry, PE, DEE  
Assistant Director  
Waste Management Division

f/McGarry:Bid Doc Cover Letter  
FJM/RM/lb  
Enclosure: Soil Excavation and Disposal Specifications

# **SOIL EXCAVATION AND DISPOSAL SPECIFICATIONS**

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## **ATTACHMENT A - AVAILABLE INFORMATION**

## **SOIL EXCAVATION AND DISPOSAL SPECIFICATIONS**

<b>Project Name:</b>		<b>Engineer:</b>	
<b>Project Location:</b>		<b>Owner:</b>	
<b>DES Site No:</b>		<b>Specification Date:</b>	

### **1.00 SCOPE OF WORK**

The Work of this Contract consists of completing all activities to meet the project objectives including, but not limited to: obtaining any and all permits required to complete the Work, soil excavation; dewatering; protection of existing utilities and other facilities; segregation of clean and contaminated soil; providing, installing and maintaining impervious covers for contaminated soil stockpiles; disposal of contaminated soils; backfilling, re-paving or other restoration of surfaces; and other tasks detailed in these specifications necessary to complete the Work. The Contractor shall furnish all labor, equipment, materials, transportation and tools required to complete the Work. The Work shall be substantially completed within \_\_\_\_\_ calendar days from the Notice to Proceed, or the DES work scope authorization approval, whichever is later.

### **2.00 ABBREVIATIONS AND DEFINITIONS**

**ASTM** American Society for Testing and Materials

**EPA** United States Environmental Protection Agency

**NHDES** New Hampshire Department of Environmental Services

**NHDOT** New Hampshire Department of Transportation Standard Specifications for Road and Bridge Construction, 2002 [or latest] ed.

**PID** Photoionization Detector

**TPH** Total Petroleum Hydrocarbons

**VOCs** Volatile Organic Compounds

“Contractor” means the person, firm or corporation with whom the Owner has executed the Agreement.

“Engineer” means the person, firm or corporation named as such in the Contract Documents.

“Owner” means a public or quasi-public body or authority, corporation, association, partnership, or individual for whom the work is to be performed.

### **3.00 BONDS**

Each Bid must be accompanied by a Bid deposit in the form of a Bid Bond, or a certified check issued by a national bank or trust company located in the State of New Hampshire and payable to the order of the Owner. The amount of deposit for this Contract shall be ten (10) percent of the Bid Price. The deposit shall be enclosed in the sealed envelope containing the Bid.

Each Bid deposit may be held by the Owner as security for fulfillment of the Bidder’s promises, set forth in his Bid, that he will not withdraw his Bid while it is being considered and will execute the Contract and furnish the required Bonds and insurance certificates if his Bid is accepted. Should the Bidder fail to fulfill such promises, his Bid deposit shall become the property of or be payable to the Owner as payment for damages. The Bid security of the successful Bidder will be retained until he has executed the Contract and furnished the required Performance Bond and insurances, whereupon the Bid security will be returned.

Unless they shall become the property of, or be payable to the Owner, Deposits or Bid Bonds will be returned to all except the three lowest Bidders within three days (Sundays and legal holidays excluded) after the formal opening of Bids, and to the three lowest Bidders within three days (Sundays and holidays excluded) after the Owner and accepted Bidder have executed the Contract. In the event that the Contract has not been executed by both the accepted Bidder and the Owner within 60 consecutive calendar days after the opening of the Bids, Bid security will be returned promptly upon demand of any Bidder who has not been notified of the acceptance of his Bid.

The successful Bidder will be required to be bonded to the Owner in a sum equal to one hundred (100) percent of the Bid Price by a separate Performance Bond.

In the event the successful Bidder fails to execute and deliver the Agreement and to furnish the required contract security and insurance certificates within ten days of the Notice of Award (Sundays and Legal Holidays excluded) the Engineer may annul the Notice of Award and the Bid Security of that Bidder shall be forfeited as liquidated damages.

In the event the successful Bidder has failed to fulfill such promises (and subject to the Owner’s right to reject all Bids), the Engineer shall issue the Notice of Award to the next

lowest responsive, responsible Bidder. Any Bidder so awarded a Contract shall fulfill every stipulation embraced herein as if he were the original party to whom the award was made.

Check deposits accompanying Bids, which are rejected, will be returned within five days (Sundays and legal holidays excluded) after the rejection of the Bid.

None of the three lowest Bids shall be deemed rejected, notwithstanding acceptance of one of the Bids, until the Contract has been executed by both the Owner and the accepted Bidder.

Attorneys-in-fact who sign Bid Bonds or Performance Bonds must file with each Bond a certified and effective dated copy of their power of attorney.

#### **4.00 MEASUREMENT AND PAYMENT**

Pay items shall be paid using the units and unit prices indicated on the Bid Form. Payment shall be full compensation for all labor, materials, equipment, tools, and transportation required to complete the Work under each pay item. Payment shall be made in accordance with the general terms and conditions of the Contract. As payment for this work will be reimbursed from the New Hampshire Petroleum Reimbursement Fund, all pay requisitions shall be in conformance with the New Hampshire Code of Administrative Rules Chapter Odb 400. As such, after the work is completed, the Engineer shall make final inspections and measurements to ensure performance in accordance with the specifications and determine quantities for the various items and certify the acceptance of work on a form provided by NHDES.

*Item 1 – Mobilization/Demobilization* includes preparation of the site, obtaining permits, establishment of temporary storage, movement of personnel, materials (not paid under other Work items) and equipment to and from the site, preparation and implementation of the Contractor's site specific Health and Safety Plan and Excavation and Dewatering Plan. No measurement will be made. Payment will be lump sum.

*Item 2 – Soil Excavation and Backfilling* includes soil excavation, segregation, stockpiling and maintenance of the stockpiles, backfilling and compaction. Measurement shall be by the cubic yard of soil excavated from the site. The volume excavated shall be computed to the nearest cubic yard, based on linear measurement of the excavation dimensions determined by the Engineer.

*Item 3 – Off-site Borrow* includes the cost of providing off-site fill to replace petroleum-contaminated soil disposed off-site, or non-contaminated unsuitable excavated soil. Measurement shall be by the ton, based on the tonnage indicated on certified weight slips.

*Item 4 – Asphalt Paving* includes the cost of furnishing, placing, and compacting asphalt plant mix. Measurement shall be by the square yard based on the area calculated by measurement of linear dimensions determined by the Engineer, to the nearest square

yard. No payment will be made for repairing/replacing paving damaged by the Contractor outside the required limits of the work area.

*Item 5 – Excavation Dewatering* includes the cost of providing, operating and maintaining equipment required to dewater the excavation. No measurement will be made. Payment will be lump sum.

*Item 6 – Off-site Contaminated Groundwater Disposal* includes the cost of off-site disposal of petroleum-contaminated groundwater. Measurement shall be by the gallon indicated on disposal bills of lading or manifests.

**OR**

*Item 6 – On-site Contaminated Groundwater Disposal* includes the cost of treating petroleum-contaminated groundwater on-site and then discharging of treated water to a permitted discharge location approved by the Engineer. Measurement shall be by the gallon based upon flow totalizer readings using a flow meter approved by the Engineer.

*Item 7 – Frac Tank* includes the cost of providing a frac tank for temporary on-site storage of groundwater, including mobilization/demobilization of the tank, preparation, cleaning and sediment/sludge removal/disposal. Measurement shall be the number of days the tank is on-site and in use, or on standby as ordered by the Engineer. Each partial day equal to or greater than 12 hours shall be considered one full day.

*Item 8 a,b – Off-site Contaminated Soil Treatment and Disposal* includes the cost of loading and transportation (Item 8a), and treatment/disposal (Item 8b) of contaminated soil. Measurement shall be the tonnage indicated on certified weigh slips.

*Item 9 – Traffic Control – Signs, Barriers, Devices* includes traffic signs, barriers, and other traffic control devices. No measurement will be made, payment will be lump sum.

*Item 10 – Loam and Seed* includes the cost of supplying, placing, and grading of loam borrow; raking, fertilizing, seeding, rolling, mulching and other work required to restore disturbed grassed areas. Measurement shall be by the square yard, based on linear measurement of the area by the Engineer. No payment will be made for repairing damaged areas outside the required limits of the work area.

*Item 11 – Asphalt Removal* includes the saw cutting, removal, loading, transportation and disposal/recycling of waste asphalt pavement material. Measurement shall be by the tonnage as indicated on certified weight slips. No payment will be made for removal of asphalt paving outside the required limits of the work area.

*Item A 1 – Traffic Control – Police Detail* (Allowance Item) includes the cost of providing one or more uniformed police officers and police vehicles, if required. Payment will be made for the actual amount invoiced by state or local law enforcement with no mark-up. The established amount in the Bid Form is for bidding purposes only. The actual invoiced amount may differ from the established amount. The Contractor is responsible for coordinating the police detail, if required.



## **BID**

Proposal of \_\_\_\_\_ (hereinafter called "Bidder"), organized and existing under the laws of the State of \_\_\_\_\_, doing business as \_\_\_\_\_.

(Corporation, Partnership, Individual)

To \_\_\_\_\_ (hereinafter called "Owner").

In compliance with your Advertisement for Bids, Bidder hereby proposes to perform all Work for the SOIL EXCAVATION AND DISPOSAL at \_\_\_\_\_ in \_\_\_\_\_, New Hampshire in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

By submission of this Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at \_\_\_\_\_ independently, without consultation, communication, or agreement as to any matter relating to the Bid with any other Bidder or with any competitor.

Bidder acknowledges receipt of the following Addendum:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The Bidder declares as follows:

1. The only parties interested in the Bid as Principals are named herein;
2. This Bid is made without collusion with any person, firm, or corporation;
3. No officer, agent, or employee of the Owner or Engineer is directly or indirectly interested in this Bid;
4. He understands the difficulties attendant upon execution of the Work, and the accuracy of all estimated quantities stated in this Bid, and he has carefully examined the proposed Agreement, the Plans and Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;

## **BID (CONTINUED)**

5. He understands that the quantities of Work tabulated in this Bid or indicated in the Specifications are only approximate and are subject to increase or decrease as deemed necessary by the Engineer.

The undersigned further understands and agrees that he is to furnish and provide for the respective item price Bid all the necessary material, machinery, implements, tools, labor, services, and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to complete the above-mentioned Work in accordance with the Contract Documents.

### Instructions for Completion of the Bid

1. The Bidder must bid on each item.
2. The Bid shall include all applicable taxes and fees.
3. The Bid must be completed in ink or typewritten.
4. The Bidder must multiply the unit price by the estimated quantity to obtain the Item Total.
5. In the event that the item total does not equal the unit price multiplied by the estimated quantity, the unit price bid shall be used to correct the item total. The corrected item total shall then be used to determine the Total Bid Price.

**BID (CONTINUED)****BID FORM**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>ESTIMATED QUANTITY</b>	<b>UNIT PRICE</b>	<b>ITEM TOTAL</b>
1.	Mobilization/Demobilization	Lump Sum	1	\$ _____	
2.	Soil Excavation & Back Filling	Cubic Yard		\$ _____	
3.	Offsite Borrow	Ton		\$ _____	
4.	Asphalt Paving	Square Yard		\$ _____	
5.	Excavation Dewatering	Lump Sum	1	\$ _____	
6.	Off-Site <b>OR</b> On-Site Contaminated Groundwater Disposal	Gallon		\$ _____	
7.	Frac Tank	Day		\$ _____	
8 a.	Loading and Offsite Transportation of Contaminated Soil	Ton		\$ _____	
8 b.	Offsite Treatment and Disposal of Contaminated Soil	Ton		\$ _____	
9.	Traffic Control – Signs, Barriers, Devices	Lump Sum	1	\$ _____	
10.	Loam and Seed	Square Yard		\$ _____	
11.	Asphalt Removal	Ton		\$ _____	
A 1	Traffic Control – Police Detail	Lump Sum	1		\$500.00
	<b>TOTAL BID PRICE</b> \$ _____ <div style="text-align: right;">(In numerals)</div> <div style="text-align: right;">Dollars</div> <div style="text-align: center;">(In words)</div> <p>Bid forms shall be completed in ink or by typewriter. In the case of a conflict between the unit price and the total amount for the item, the unit price will take precedence. In case of conflict between the Total Bid Price in numerals and written words, the written words take precedence.</p>				

**BID (CONTINUED)**

The Bidder hereby agrees that he will not withdraw his Bid within 60 consecutive calendar days after the actual date of the Opening of Bids and that, if the Owner accepts his Bid, the Bidder will duly execute and acknowledge the Contract, and furnish, duly executed and acknowledged, the required Performance Bond within ten (10) days (Sundays and Holidays excluded) after the Notice Of Award.

Should the Bidder fail to fulfill any of his agreements as hereinabove set forth, the Owner shall have the right to retain as liquidated damages the amount of the bid security which shall become the Owner's property.

The Bidder, by submittal of this Bid, agrees with the Owner that the amount of the Bid security deposited with this Bid fairly and reasonably represents the amount of damages the Owner will suffer due to failure of the Bidder to fulfill his agreements as above provided.

Respectfully Submitted:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Being duly sworn, deposes and says that he is

\_\_\_\_\_  
of

\_\_\_\_\_  
(Name of Organization)

and that the answers to the foregoing questions and all statement contained therein are true and correct.

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_.  
(Seal – If Bid is by Corporation)

ATTEST \_\_\_\_\_

## **GENERAL CONDITIONS**

### **5.00 CONTRACT AND CONTRACT DOCUMENTS**

The plan(s), information for bidders, bids, advertisement for bids, bid bond and performance bonds, Agreements, change orders, notice to proceed, specifications and addenda, hereinafter enumerated in the Agreement, shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth.

### **6.00 JOB CONDITIONS**

Available reports, boring logs and chemical testing data are listed in Attachment A to these Specifications. Prior to submitting his bid, the Contractor must review and understand the available information, and develop appropriate means and methods for executing the work of these Specifications (the Work) accordingly. The information is made available to the Contractor for information and factual data only, and shall not be interpreted as a warranty of subsurface conditions. The Contractor should base his means and methods for executing the Work not only on the available information, but also on his local experience and knowledge. The Contractor is expected to visit the site to evaluate site conditions that may affect the performance of the Work.

### **7.00 TRAFFIC CONTROL**

The Contractor shall provide a police detail for traffic control where required by state or local authorities, or as directed by the Engineer. A police detail shall consist of one or more uniformed police officers, with or without a vehicle, as deemed necessary by state or local authorities. The Contractor shall establish requirements for traffic control with the applicable state and local authorities. Officers shall be clothed in a suitable and characteristic uniform that will readily distinguish them from all other employees. Officers shall be attired with regulation caps and high visibility vests. Officers shall have police powers granted by the proper authorities, and shall wear an exposed badge. The Contractor shall provide signs, traffic cones, barriers, and other devices where required to control traffic flow.

### **8.00 RESPONSIBILITIES OF OWNER**

The owner will be responsible for watering of seeded areas. The Owner will provide access to on-site potable water and sanitary facilities during the Work.

### **9.00 PERMITS, RULES, ORDINANCES**

All permits and licenses necessary for the prosecution of the Work shall be obtained and paid for by the Contractor. Permits may include:

- a. New Hampshire Department of Transportation Highway trench permits.
- b. RSA 149-M:10 New Hampshire Bureau of Solid Waste – disposal of construction debris and/or demolition waste.
- c. Other permits, as required by Federal, State and Local laws and ordinances.

The Contractor shall comply with all applicable laws, rules, regulations, codes, and ordinances, and obtain all applicable permits prior to the start of Work. Obtain Digsafe clearance prior to the start of Work. Obtain local and NHDOT bonding, and street opening permits where required.

The Contractor shall comply with the requirements of State of New Hampshire Code of Administrative Rules Env-Wm 1600, Standards for Reporting and Remediation of Oil Discharges.

## **10.00 HEALTH AND SAFETY RESPONSIBILITIES**

The Contractor shall at all times be responsible for exercising reasonable precaution for the health and safety of his employees, subcontractors and vendors engaged in the execution and control of the Work required in these Specifications. The Contractor shall comply with all applicable provisions of federal, state and local health and safety statutes, codes and regulations, including 29 CFR Parts 1910 and 1926.

The Contractor shall prepare a project specific Health and Safety Plan, for use by all his employees, subcontractors and vendors engaged in the Work. The Contractor shall review the plan with all on-site employees and other personnel prior to starting the Work. Note that excavation and handling of petroleum contaminated soil and groundwater shall be required.

## **11.00 UNDERGROUND UTILITIES**

Underground utilities may exist in the work areas. The Contractor shall review the locations of underground utilities with the Engineer before beginning excavation or other intrusive activities. The Contractor shall review any available drawings indicating utility locations. The Contractor shall contact appropriate local or municipal utilities and contact Digsafe and obtain an Authorization to Excavate number prior to beginning any intrusive work at the site.

The Contractor is responsible for any damage to utilities marked by the local or municipal utilities or Digsafe, shown on drawings, or otherwise believed to be present

based on the Contractor's field observations or discussions with the Owner and/or Engineer. Any such utilities damaged by performance of the Work shall be repaired by the Contractor at no additional cost. The Contractor shall repair all damaged utilities to the satisfaction of the utility owner and the Engineer.

## **12.00 PROTECTION OF WORK**

The Contractor shall protect the Work from wind and water erosion including but not limited to providing temporary berms, swales, and other structures, as appropriate, to redirect surface water away from excavated areas. The Contractor shall be responsible for, but not paid for, proper management, treatment, and disposal of any surface water that enters the excavation due to surface runoff.

The Contractor shall protect above and below grade utilities and structures, which are to remain. Provide suitable support for utilities that may be affected by the Work. Protect landscaping, structures, paving, monitoring wells and other features outside of the work area. Install barriers or grade the area surrounding the excavation to prevent the flow of surface water into the excavation.

The Contractor shall protect from damage all curbing and pavement outside of the limits of the work area. Replace all curbing or pavement that is damaged by performance of the Work. Curbing or pavement outside of the limits of the work area that is damaged by performance of the Work shall be replaced at no additional cost.

## **13.00 PROSECUTION OF WORK**

It is understood and mutually agreed by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the Contract of the Work to be done hereunder are essential conditions of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed."

The Contractor shall pursue the Work regularly, diligently and continuously at such rate of progress as will ensure full completion thereof within the time specified in the Contract. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the Work described is a reasonable time. The Contractor shall limit the days and hours of work to comply with local ordinances.

## **14.00 INSURANCE**

The Contractor shall not commence work under this Contract until he has obtained all the insurance required under this article and such insurance has been approved by the Engineer. The Owner (as defined at the beginning of these Specifications) shall be named as an additional insured party on all General Liability policies.

The minimum limits of liability of such insurance shall be as follows:

**A. General (Comprehensive) Liability and Owners Protective Liability:**

<b>Description</b>	<b>Amount</b>
Bodily Injury or Death – Each Person	\$500,000
Bodily Injury or Death – Each Accident	\$1,000,000
Property Damage – Each Accident	\$500,000
Property Damage – Aggregate	\$1,000,000

**B. Automobile and Truck Liability:**

<b>Description</b>	<b>Amount</b>
Bodily Injury or Death – Each Person	\$500,000
Bodily Injury or Death – Each Accident	\$1,000,000
Property Damage – Each Accident	\$200,000
Property Damage – Aggregate	\$200,000

**15.00 ENGINEER'S ESTIMATED QUANTITIES**

The Engineer's estimated quantities are indicated on the Bid Form. Actual quantities may vary from those indicated. The total Bid Price for each item shall be based on the quantities indicated on the Bid Form. No adjustment, either up or down, in unit price for an individual pay item will be considered unless the actual quantity of the pay item required to complete the Work varies by greater than twenty five percent (25%) from that indicated on the Bid Form.

Should any unit priced item contained on the Bid Form be found unnecessary for the proper completion of the Work, the Engineer, may eliminate such item from the contract and such action shall in no way invalidate this Agreement. No allowance will be made for items so eliminated.

**16.00 EXTRA WORK AND CHANGE ORDERS**

16.01 – The Engineer may at any time by written order and without notice to the Sureties require the performance of such extra work or changes in the Work as may be found necessary or desirable. The amount of compensation to be paid to the Contractor for any extra work so ordered shall be made in accordance with whichever of the following plans the Engineer elects and which is authorized by DES: (1) a price agreed upon between the parties and stipulated in the order for the extra work, (2) a price based on the unit prices of the Contract. The Contractor shall furnish supporting documentation covering all items of cost in conformance with the New Hampshire Code of Administrative Rules Chapter Odb 400 and, when requested by the Owner, shall allow the Owner access to accounts relating thereto.



16.02 – The Engineer may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a written Field Order. However, if the Contractor believes that any minor change or alteration authorized by the Engineer entitles him to an increase in the contract price, he may make a claim as provided in Section 18.00

## **17.00 CLAIMS FOR DIFFERING SITE CONDITIONS**

17.01 – The Contractor shall promptly and with out further disturbance, notify the Engineer in writing of:

- A. Subsurface or latent physical conditions at the site differing materially from those indicated in this Contract; or,
- B. Unknown physical conditions at the site, differing materially from those ordinarily encountered and generally recognized as inherent in the type of work provided for in this Contract.

17.02 – The Engineer shall promptly investigate the conditions. If he finds that conditions differ materially and will cause an increase or decrease in the Contractor's cost or the time required to perform any part of the Work under this Contract, the Engineer, after obtaining approval from DES, shall make an equitable adjustment and modify the Contract in writing.

17.03 – No claim of the Contractor under this clause shall be allowed unless the Contractor has given proper notice as required in paragraph 17.01 of this Section.

17.04 – No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this Contract.

## **18.00 CLAIMS FOR EXTRA COST**

18.01 – No claims for extra work or cost shall be allowed unless done pursuant to a written order by the Engineer, approved by the Owner and DES.

18.02 – If the Contractor claims that any instructions by drawings or similar documents issued after the date of the Contract involve extra cost under the Contract, he shall give the Engineer written notice after the receipt of such instruction and before proceeding to execute the work, except in an emergency which threatens life or property, then the procedure shall be as provided for under Section 16.00. No such claim shall be valid unless so made.

## **SPECIFICATIONS**

### **19.00 SUBMITTALS**

Submit to the Engineer the following items a minimum of one week prior to the start of the Work: Work shall not proceed until the items are approved or acknowledged by the Engineer.

1. Copies of all required permits;
2. Certificates of insurance in accordance with Section 14.00;
3. Identification of the proposed disposal/recycling facility for petroleum contaminated soil;
4. Minimum 50 lb. sample of each proposed fill material, with a description of source location and proposed use of each sample;
5. Results of laboratory soil tests for grain size distribution (in accordance with ASTM D-422) and Compaction Characteristics (in accordance with ASTM D-698) for each proposed fill material; and
6. Excavation and Dewatering Plan describing means and methods of developing the required excavations, proposed dewatering methods including filtering devices or materials, treatment methods and proposed discharge/disposal location.

Submit to the Engineer the following within one week of completion of the Work:

1. Copies of Bills of Lading and weight slips for all petroleum contaminated soil transported off-site;
2. Copies of Bills of Lading or manifests for petroleum contaminated groundwater transported off-site; and
3. Copies of weight slips for all off-site fill delivered to the site.

Submit copies of Certificates of Destruction for all petroleum contaminated soil transported off-site to the Owner within 10 days from receipt from the disposal facility.

### **20.00 EXCAVATION**

20.01 – General – Excavate soil within the approximate limits indicated on the Site Plan. Actual vertical and horizontal limits of excavation will be determined by the Engineer in the field based on indications of contamination, the presence of groundwater, and other factors. Cease excavation before undermining footings or utilities, or affecting the

stability of structures. Maintain a minimum lateral distance of one foot away from footings or bottom of other structures for each foot of depth of excavation below the structure, or as otherwise necessary to protect existing utilities or structures. Excavate using methods that do not disturb nor damage pavement outside the final limits of the work area. The estimated volume of excavation is indicated on the attached bid form. The estimated dimensions of the excavation are approximately:

\_\_\_\_\_ft. by \_\_\_\_\_ft. by \_\_\_\_\_ft.  
length width depth

Uncontaminated soil is expected to be approximately \_\_\_\_\_feet deep through out the excavation. Soil shall be segregated in accordance with Section 22.01 and backfilled in accordance with Section 23.

20.02 – Protection of Existing Facilities - Protect landscaping structures, paving, monitoring wells and other features outside of the limits of the Work. Install barriers or grade the area surrounding the excavation to prevent the flow of surface water into the excavation. Provide fences, barricades or any other means necessary to protect the public from entering the work area or open excavations.

20.03 – Removal of Pavement - Excavate using methods that do not disturb or damage pavement outside the final limits of the excavations. Saw cut existing pavement using a pavement saw or wheel cutter prior to final backfilling and re-paving. At no additional cost, saw cut around any areas of pavement beyond the limits of the required excavations, that have been damaged by performance of the Work. Limits of pavement cutting and removal will be defined by the Engineer following completion of excavation. Remove, and properly dispose of pavement off-site.

20.04 – Support of Excavations - Take adequate measures to support structures, streets, utilities, sidewalks and other facilities in the vicinity of the excavations to protect such facilities against damaging movements or effects, and to protect workers from injury. If movements or other effects of construction are noted, revise construction procedures and take measures to mitigate and abate further movement, at no additional cost.

## **21.00 DEWATERING**

21.01 – General – During excavation, and prior to backfilling, remove accumulated groundwater from the excavation using a pump or other means, in accordance with the Excavation and Dewatering Plan. Control and remove groundwater in such a manner as to prevent loss of fines from the soil and to prevent damage to adjacent structures from dewatering-induced settlement, and to allow the proper placement and compaction of fill.

21.02 – Testing and On-site Disposal of Groundwater – Temporarily store contaminated groundwater in a frac tank. The Engineer will provide the Contractor with laboratory analytical results for petroleum contaminated groundwater requiring on-site treatment. The Engineer shall obtain all permits for the on-site treatment and disposal of contaminated groundwater. The Engineer shall provide the Contractor with a copy of all

discharge permits a minimum of one week prior to the start of Work. The Contractor shall provide adequate on-site treatment to meet applicable discharge permit limits.

OR

21.02 – Testing and Off-site Disposal of Groundwater – Temporarily store contaminated groundwater in a frac tank. The Contractor shall dispose of all petroleum contaminated groundwater generated during the Work at a licensed disposal facility.

## **22.00 CONTAMINATED SOIL HANDLING**

22.01 – Soil Segregation – Field screening of excavated soil will be performed by the Engineer. Soil will be assessed for indications of petroleum contamination based on odor, appearance, and the presence of VOCs using an appropriate field screening instrument. The Engineer will classify soils as contaminated or non-contaminated to facilitate Contractor management of soils.

The Contractor shall segregate excavated soils into contaminated and non-contaminated stockpiles, based on the Engineer's classification. Construct stockpiles on a double layer of 6-mil polyethylene sheeting. Cover the stockpiles with a single layer of 6-mil polyethylene sheet at the end of each workday. Secure sheet to prevent disturbance by wind. Maintain the stockpile and replace the cover, if damaged.

22.02 – Soil Testing – The Engineer will be responsible for obtaining and analyzing composite samples of suspected petroleum contaminated soil for disposal characterization in accordance with Env-Wm 1600 *Standards for Reporting and Remediation of Oil Discharges*. The Engineer will provide the Contractor with copies of the laboratory report(s), and a completed Non-hazardous Oil Contaminated Soil (NOCS) certification in accordance with Env-Wm 1600. The Engineer will also obtain soil samples from the bottom and sidewalls of the excavations for confirmatory off-site laboratory analysis .

22.03 – Disposal of Contaminated Soils – The Contractor shall dispose of contaminated soil at an approved off-site facility. The Contractor shall contract with the disposal facility for loading, transportation, and disposal of the soil. Soil shall be transported in accordance with NHDOT requirements. All contaminated stockpiles shall be removed from the site and transported to an approved disposal facility within 4 weeks after receipt of analytical results. The Contractor shall be responsible for any additional disposal costs incurred due to excess weight caused by increase in soil moisture content after the soil is excavated. The Contractor shall protect excavated soil to prevent infiltration of water into, and erosion of soil from the stockpiles.

## **23.00 BACKFILLING**

23.01 – General – Do not backfill excavations until the limits of excavation are approved by the Engineer. All off-site backfill materials must be approved by the Engineer prior to delivery to the site.

Placement, compaction and grading of all fill materials shall be conducted in accordance with applicable NHDOT Specifications. Maximum particle size of any fill material shall not exceed three-fourths of the loose thickness of the lift being placed. Uncontaminated on-site soils meeting the gradation requirements of Section 23.02 shall be re-used as fill to the extent practicable. All fill materials shall consist of mineral soil, free of loam, trash, snow, ice, organics, construction debris or other detrimental materials.

### **23.02 – Materials**

Common Fill – Common fill shall have a maximum of 30 percent by weight passing the No. 200 (.075 mm) sieve. Common fill shall be used as backfill up to a depth of 21 inches below the proposed finished grade.

Gravel – Gravel shall conform to NHDOT 304.2. A 12 inch compacted thickness of Gravel shall be placed immediately above the common fill placement.

Crushed Gravel – Crushed Gravel shall conform to NHDOT Item No. 304.3 (Modified Crushed Gravel). A minimum 6 inch compacted thickness of Crushed Gravel shall be placed immediately above the Gravel placement.

23.03 – Re-Use of Excavated Soils – Suitable non-contaminated soil shall be used as backfill. Suitable soil shall be: 1) in conformance with the material gradation requirements of Section 23.02; 2) capable of being compacted to the minimum required density; and 3) capable of producing a dense, stable subgrade in the opinion of the Engineer. The Engineer will determine what soils are suitable for re-use. Unsuitable non-contaminated soil shall be disposed on-site at a location designated by the Engineer.

23.04 – Placement and Compaction – Material shall be placed in lifts not exceeding 12 inches in loose thickness. Compact each lift with a minimum of four complete coverages of self-propelled vibratory compaction equipment to at least 95 percent of maximum dry density as determined in accordance with ASTM D-698 (Standard Proctor Test). Maintain or adjust moisture content as necessary to attain the minimum required degree of compaction. In areas where vibratory plate compactors are used, reduce the maximum loose lift thickness to 8 inches.

Compaction testing will be conducted by the Engineer.

23.05 – Replacement of Non-Conforming Off-site Borrow – Off-site borrow materials not meeting the requirements of these Specifications shall be removed, disposed of and replaced with conforming materials by the Contractor at no additional cost.

## **24.00 PAVING AND CURBS**

24.01 – Paving – Place bituminous concrete pavement within saw cut pavement areas. Material and workmanship shall conform to NHDOT 401. Base course shall be 2-inch compacted thickness, NHDOT Type B. Wearing course shall be 1-inch compacted thickness, NHDOT Type E. Finish grade shall be flush with elevation of cut edges of existing pavement, and sloped to conform to flow paths in existing pavement. Restore any existing pavement markings, conforming to NHDOT 708-NH 4.11.

24.02 – Curbs – Reinstall all curbs removed during execution of the Work in accordance with NHDOT 609. Replace all curbs broken due to performance of the Work.

## **25.00 LOAM AND SEED**

Restore all grassed areas disturbed by the Work. Loam shall consist of loose friable topsoil with no admixture of refuse or material toxic to plant growth. Loam shall be generally free from stones, lumps, stumps, or similar objects larger than 50 mm (2 in) in greatest diameter, subsoil, roots, and weeds. Spread a minimum 4 inch thickness of loam in accordance with NHDOT 641.

Prepare the seed bed in accordance with NHDOT 644. Apply starter type fertilizer at the rate recommended by the manufacturer. Apply Park Seed Type 15 seed in accordance with NHDOT 644. Apply hay mulch in accordance with NHDOT 645.

## **26.0 SITE RESTORATION**

The Contractor shall restore objects or site features damaged by the work to a condition equivalent to pre-construction conditions. Replant salvaged vegetation, replace damaged vegetation with similar new plantings. Replace or restore other miscellaneous salvaged or damaged objects or site features, such as signs, planters, lighting, etc. that were disturbed because of the Work.

## **SUPPLEMENTAL GENERAL CONDITIONS**

For the above contract, the following supplements modify the General Conditions contained herein. Where a portion of the General Conditions is modified or deleted by these Supplemental General Conditions, the unaltered portions of the General Conditions shall remain in effect.

*[Insert specific changes to existing sections of the General Conditions along with any new requirements not currently addressed]*

## **ATTACHMENT A – AVAILABLE INFORMATION**

Prior to submitting his bid, the Contractor must review and understand the available information, and develop appropriate means and methods for executing the Work of these Specifications accordingly. The information is made available to the Contractor for information and factual data only, and shall not be interpreted as a warranty of subsurface conditions.

The Available Information listed below is available for review at the following address and times:

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AVAILABLE INFORMATION:

### Soil Disposal Characterization Data

## Site Investigation Groundwater and Soil Analytical Data

## Soil Boring Logs

### Monitoring Well Construction Details

### Groundwater Elevation Data

## Non-Hazardous Oil Contaminated Soil (NOCS) Certification

## Property Boundary Map

[illegible]